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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,296	10/14/2003	Graham MacKay	WEAT/0489	9827

7590 06/27/2005

WILLIAM B. PATTERSON
MOSER, PATTERSON & SHERIDAN, L.L.P.
Suite 1500
3040 Post Oak Blvd.
Houston, TX 77056

EXAMINER	
HOUSE, LETORIA G	
ART UNIT	PAPER NUMBER
3672	

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/685,296	MACKAY ET AL.	
	Examiner	**Art Unit**	
	Letoria House	3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *2/25/04;2/27/04* ; 3/17/05

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Head (U.S. 6,234247).

Head discloses a safety valve (24); and a connection member (27) for supplying energy to the downhole tool (28), wherein the connection member is at least partially integrated with the safety valve. See figures 3-5, and column 3, lines 30-37.

2. Claims 1-3, 5, 7, 9-10, 13-15, 19-22, 24-27, 29-30, and 32-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Malone et al. (U.S. 6,341,652). Note Figure 9.

With regard to claim 1, Malone et al. discloses a safety valve (76); and a connection member (30) for supplying energy to the downhole tool, wherein the connection member is at least partially integrated with the safety valve (76). See figure 9, column 5, lines 62-65.

With regard to claim 2, Malone et al. teaches a subsurface valve (76) for regulating fluid flow; and a connection member (30) for supplying energy to the downhole pumping system (26), wherein the connection member and the valve are disposed inside the tubular (18) and the valve integrity is maintained (76). See Figures 1,8 and 9, column 3, lines 4-10.

With regard to claim 3, Malone et al. teaches the apparatus (74A) wherein a portion of the connection member (30) is inside the valve (76).

With regard to claim 5, the reference teaches the apparatus (74A) further comprising a tubing insert (34B) for transporting fluid to surface. See figure 9; column 9, lines 51-59.

With regard to claim 7, the reference teaches the apparatus (74A) further comprising at least one electrical adapter (120) for routing the connection member (30) between an exterior and interior of the valve (76).

With regard to claim 9, the reference teaches the valve (76) comprising a housing and a fluid bore (34B). See figure 9.

With regard to claim 10, the reference discloses the connection member (30) disposed in the housing. See figure 9.

With regard to claim 13, the reference discloses the apparatus further comprising a liquid conduit extending from the valve (76) to the pumping system (26). See figure 8.

With regard to claim 14, the reference discloses the apparatus wherein an annulus is defined by the liquid conduit and the tubular (18). See figure 8.

With regard to claim 15, the reference discloses the apparatus wherein a portion of the connection member (30) is disposed in the annulus.

With regard to claim 19, the reference discloses the apparatus (74A) wherein the connection member is selected from the group consisting of cable, electric wire, tubing, and rod. See column 3, lines 4-10.

With regard to claim 20, Malone et al. discloses an apparatus capable of performing the steps of:

Installing a safety valve (76) in the production tubing; locating a pumping system (26) in the well; and providing a connection member (30) to supply energy to operate the pumping system (26), wherein the integrity of the safety valve is maintained.

With regard to claim 21, the reference is capable of performing the step of transporting liquid to the safety valve through a liquid conduit (34B).

With regard to claim 22, the reference is capable of performing the step of mixing the liquid with gas before entering the safety valve (76).

With regard to claim 24, the reference is capable of performing the steps of claim 20, further comprising removing a pre-existing safety valve before installing the safety valve.

With regard to claim 25, the reference is capable of performing the steps of claim 20 wherein the connection member (30) is disposed in the safety valve (76).

With regard to claim 26, the reference is capable of performing the steps of claim 20, further comprising routing the connection member (30) from the exterior of the safety valve (76) to the interior of the safety valve (76).

With regard to claim 27, the reference is capable of performing the steps of claim 20 wherein the pumping system (26) is disposed below the safety valve (76).

With regard to claim 29, the reference is capable of performing the steps of claim 20, further comprising integrating the connection member (30) with the safety valve (76).

With regard to claim 30, the reference is capable of performing the steps of claim 20, wherein the connection member (30) comprises a cable. See column 3, lines 4-10.

With regard to claim 32, the reference is capable of performing the step of supplying power from surface to the pumping system (26) through a safety valve (76).

With regard to claim 33, the reference is capable of performing the steps of:

Locating a valve (76) in the tubular upstream from the downhole tool; installing a connection member (30) in the tubular, wherein the connection member (30) is capable of providing energy to the downhole tool (26); and supplying power downstream to the downhole tool (26).

With regard to claim 34, the reference is capable of performing the steps of claim 33 further comprising integrating the connection member (30) with the valve (76).

With regard to claim 35, the reference is capable of performing the steps of claim 33 wherein the valve (76) comprises a safety valve. Column 5, lines 62-65.

With regard to claim 36, the reference is capable of performing the steps of claim 33, wherein the valve (76) is capable of limiting fluid communication in the tubular.

With regard to claim 37, the reference is capable of performing the steps of:

Providing a power source (30); locating a valve (76) in the tubular between the energy source and the downhole tool (26); installing a connection member (30) in the tubular; and supplying energy from the energy source to the downhole tool (26).

3. Claim 31 is rejected under 35 U.S.C. 102(b) as being anticipated by Bayh, III (U.S. 4,749,341). Bayh, III discloses an apparatus capable of performing the steps of:

> Installing a cable (37) from surface to a pumping system (36) disposed below a subsurface safety valve (39), wherein the cable is at least partially disposed in the production tubing (22). See Figure 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 4, 8, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malone et al. (U.S. 6,341,652) in view of Vinzant et al. (U.S. 4,461,353).

With regard to claims 4 and 8, Malone et al. discloses the invention as applied to claims 1-3, 5, 7, 9-10, 13-15, 19-22, 24-27, 29-30, and 32-37 above, but fails to disclose the apparatus further comprising a locking mandrel for engaging the tubular, or the valve mating with a valve nipple. Vinzant et al. suggests that the use of a locking mandrel (20) and a valve nipple (21) are common and well known in the art when incorporating a retrievable safety valve (19) into a well system. Therefore, it would have obvious to one skilled in the art at the time of the invention to modify the safety valve system of Malone et al. to include the locking mandrel and valve nipple of Vinzant et al. in order to provide an improved safety valve wherein the retrievable portion is shorter and low in weight for economy and ease of installation, operation, and retrieval.

With regard to claim 18, Malone et al. discloses the invention as applied to claims 1-3, 5, 7, 9-10, 13-15, 19-22, 24-27, 29-30, and 32-37 above, with the safety valve located in the casing, but fails to disclose the apparatus wherein the tubular comprises a production tubing. Vinzant et al. suggests a safety valve may be used with production tubing (14) to perform the same function as the safety valve of Malone et al. See Vinzant et al. figure 1. Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the system of Malone et al. to incorporate the alternate use of the safety valve with production tubing in order to achieve the same quality of production flow control.

5. Claims 6, 11-12, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malone et al. (U.S. 6,341,652) in view of Bayh, III (U.S. 4,749,341).

With regard to claim 6, Malone et al. discloses the invention as applied to claims 1-3, 5, 7, 9-10, 13-15, 19-22, 24-27, 29-30, and 32-37 above, but fails to disclose the apparatus wherein a portion of the connection member is disposed in an annulus defined by the tubing insert and the tubular. Bayh, III suggests that routing the connection member (88, 89, 91) into an annulus defined by the tubing insert (42) and the tubular (22) is an alternative configuration that is useful to maintain tension in the connection members. See figure 2 A-C. Therefore it would have been obvious to one skilled in the art at the time of the invention to modify the apparatus of Malone et al. to include the alternative connection member routing arrangement of Bayh, III to prevent damage and increase the life of the system.

With regard to claims 11 and 12, Malone et al. discloses the invention as applied to claims 1-3, 5, 7, 9-10, 13-15, 19-22, 24-27, 29-30, and 32-37 above, but fails to teach a fluid bore that is offset relative to the axis of the valve, and the connection member is adjacent to the offset fluid bore. Bayh, III suggests that an offset fluid bore is convenient where both gas and fluid are being produced and shows the connection member routed adjacent to the fluid bore. Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the apparatus of Malone et al. to include the offset bore with the connection member routed adjacent to the offset bore in order to provide space for the connection member and equipment between the pump and the connection member.

With regard to claim 28, Malone et al. discloses the invention as applied to claims 1-3, 5, 7, 9-10, 13-15,19-22, 24-27, 29-30, and 32-37 above, but fails to disclose the method of claim 20 wherein the connection member is disposed within the production tubing. Bayh, III suggests that it is equally efficient to dispose the connection member (37) within the production tubing (22). See Bayh, III Figure 1. Therefore it would have been obvious to one skilled in the art at the time of the invention to route the connection member of Malone et al. through the production tubing as a matter of design choice.

6. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malone et al. (U.S. 6,341,652) in view of Beauquin (U.S. 6,250,384).

Malone et al. discloses the invention as applied to claims 1-3, 5, 7, 9-10, 13-15, 19-22, 24-27, 29-30, and 32-37 above, but fails to disclose the apparatus wherein gas flows up the annulus and the liquid flows up the liquid conduit, wherein the liquid and the gas are mixed before entering the safety valve. Beauquin suggests that in producing an oil and gas mix it is useful to mix and recombine liquid and gas in order to lighten the column of effluent contained n the tubing. Therefore it would have been obvious to one skilled in the art at the time of the invention to modify the pumping system of Malone et al. to include the liquid-gas mixing capabilities of the Beauquin pumping system in order to make it easier to raise the mixture to the surface. See Beauquin column 3, lines 46-50.

7. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Malone et al. (U.S. 6,341,652) in view of Crow et al. (U.S. 5,823,265).

Malone et al. discloses the invention as applied to claims 1-3, 5, 7, 9-10, 13-15,19-22, 24-27, 29-30, and 32-37 above, but fails to disclose the apparatus wherein installing the safety valve and locating the pumping system is performed in one trip. Crow et al. suggests that using a running tool and installing the well control valve assembly (200), with the production string hanging therefrom in necessary to improve the economics of well completion by reducing rig time. See column 2, lines 66-67; and column 6, lines 45-48. Therefore it would have been obvious to one skilled in the art at the time of the invention to incorporate the one trip installation of Crow et al. into the safety valve installation of Malone et al. in order to reduce well completion costs.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Letoria House whose telephone number is (571) 272-8118. The examiner can normally be reached on M-F, 7:00 A.M. - 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Bagnell
Supervisory Patent Examiner
Art Unit 3672

LGH